

Bibliometric Analysis of *DESIDOC Journal of Library and Information Technology* during 2001-2010

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ABSTRACT

DESIDOC Journal of Library and Information Technology (DJLIT) is one of the premier journals of library and information science being published in India. It is brought out by Defence Scientific Information and Documentation Centre (DESIDOC), a constituent establishment of Defence Research and Development Organisation (DRDO). *DJLIT* has just completed 30 years of its publication. This paper presents bibliometric analyses of *DJLIT* during 2001-2010. The analysis covers various parameters like growth pattern, content coverage, authorship patterns, subject-wise distribution of articles, etc.

Keywords: Bibliometric analysis, content analysis, LIS journals, Defence Research & Development Organisation, Defence Scientific Information & Documentation Centre

1. INTRODUCTION

Periodicals are the most preferred medium of latest information. Scholarly journals are used by the scientists and professionals to share their ideas, thoughts, inventions, innovations, and discoveries. Libraries and documentation centres worldwide ensure the free flow of information and provide support services like circulation, reference, photocopy, etc., to researchers in academic institutions, autonomous research organisations, policy making bodies, planning and research units of government departments, business and industry, etc. Libraries play the roles of both knowledge accumulator and disseminator. Libraries are the only source that generally identify, acquire and disseminate the information. But the exponential growth of periodicals, varied demands of readers, ever-increasing cost of the publications, and the shrinking resources of libraries have put constraints on libraries to subscribe the types of resources. Bibliometric studies have helped librarians to use their meager resources in judicious selection of journals and other periodicals for their users.

The terms bibliometrics and scientometrics were introduced by Pritchard, Nalimov and Mulchenko in 1969. Bibliometric study is a simple statistic method of bibliography counting to evaluate and quantify the growth of a subject¹. This paper presents the bibliometric study of

DESIDOC Journal of Library and Information Technology (DJLIT), previously known as *DESIDOC Bulletin of Information Technology (DBIT)*, and its rise and growth as a core and primary research journal in the field of library and information science in India.

2. GENESIS OF THE JOURNAL

DESIDOC Journal of Library and Information Technology (DJLIT), one of the popular bimonthly journals of LIS in India, is brought out by Defence Scientific Information and Documentation Centre (DESIDOC), a premier documentation institution in India. The *Journal* endeavours to bring recent developments in library and information technology, as applicable to library and information science, to the notice of librarians, documentation and information professionals, students and other interested in the field. The articles published in the *Journal* are peer-reviewed, and indexed in *Library and Information Science Abstracts (LISA)*; *Library, Information Science and Technology Abstracts (LISTA)*; *Indian Citation Index (ICI)*; and *Indian Science Abstracts*. The full text of articles published in *DJLIT* is being reproduced in electronic databases of HW Wilson Company, namely, *OMNIFILE Full Text Select* and *OMNIFILE Full Text Mega*.

The periodical started in 1980 as *DESIDOC Bulletin*—a four-page newsletter—basically to publish the activities of the DESIDOC. In the late 1980s, a new era of information technology dawned in India. Computers started revolutionising the working culture and information science and technology was the buzz word. The field of library and information science was also not left unchanged. The coverage in the *DESIDOC Bulletin* also kept pace with the time and its coverage was enhanced with new columns like IT Scan, IT Events, Book Reviews, and Recommended Websites. It initially included at least one paper (usually from DESIDOC) and its print run was limited. It was unpriced and was mailed to institutions free of charge. In 1990s, Dr S.S. Murthy, the then Editor-in-Chief, started special issues on topics of interest like Bibliographic Databases, Library Networks, Electronic Publishing, etc., with eminent professionals as Guest Editors. As the *Bulletin* grown in stature and circulation, it was decided to price it to off set the postage expenses. In 1992, the *Bulletin* was renamed as *DESIDOC Bulletin of Information Technology (DBIT)*.

Information technology also changed the publishing scenario. Internet made dissemination of information easier and writers their own publishers. *DBIT* too adapted new technologies as and when these hit the market. Under the current Editor-in-Chief, there was a paradigm shift in the *DBIT* after February 2006. New policy initiatives were taken: Editorial Board of the *Bulletin* was revamped to include experienced LIS professionals; peer-evaluation of papers, which was earlier limited and institutional, was started involving professionals and academicians from outside; and the secondary information in *DBIT* was done away with. It was also decided to publish at least three special issues in a year.

In 2008, *DBIT* became a primary research journal and was rechristened as *DESIDOC Journal of Library and Information Technology (DJLIT)*. Since then, only primary research work, after peer-evaluation, is accepted for publication. Thematic issues on contemporary subjects have been brought out along with general issues. The numbers of papers now being published have increased to eight to nine from earlier two to three. Two other milestones were also achieved in 2008. First, when *DJLIT* adopted Open Journal System—an online publication management system. The system helped in fast processing of papers submitted for publication in the journal and reduced the time taken for publishing papers from usually 11 to 12 months to 6 to 7 months. Besides, it gave the authors facility to monitor the status of their papers online. Second, since January 2008, *DJLIT* became an open access journal. The full-text of the articles being published in *DJLIT* is now also available on Internet at <http://publications.drdo.gov.in/ojs/index.php/djlit>.

3. OBJECTIVES

This paper has the following objectives:

- ✘ To study year-wise distribution of papers,
- ✘ To study authorship pattern of the papers,
- ✘ To study average number of references per paper,
- ✘ To study average length of the papers,
- ✘ To study subject-wise distribution of the papers, and
- ✘ To study institute-wise distribution of papers.

4. RELATED STUDIES

Various authors have done bibliometric/content/citation analyses of papers published in various journals in different fields. Thanuskodi² has done a bibliometric study of *Journal of Social Sciences*. Patra³ has done bibliometric study of literature on bibliometric. Tigga⁴, *et al.*, and Bansal⁵, *et al.* have done content analysis and content coverage of *DESIDOC Bulletin of Information Technology (now DJLIT)*. Vij and Bedi⁶ have done 10-year bibliometric study of *Defence Science Journal (DSJ)* and Verma and Tamrakar⁷ have analysed contributions to *DSJ*.

5. METHODOLOGY

DJLIT was used as a source journal for the study. Issues from 10 volumes, i.e., 2001-2010 were scanned to collect the data. Quantitative and inferential methods have been used for evaluating the data.

6. DATA ANALYSIS

The number of papers published during 2001-2010 is 271 comprising research and review papers as well as short communications. Guest Editorials published in special/thematic issues have been excluded from the study. The *Journal* before 2006, used to publish columns like IT Scan, IT Events, Book Reviews, Recommended Websites, these also have been excluded from the study.

6.1 Year-wise Distribution of Papers

Table 1 shows the number of papers published in *DJLIT* during 2001-2010. It is evident from the Table that during 2001-2005 publication was not regular and on three occasions, i.e., 2001, 2002, and 2005 five issues each were brought out. However 2006 onwards, the journal has been coming out regularly with all the six issues and with more papers. Table also shows that maximum papers (17.3 per cent each) were published in 2008 and 2009, and minimum papers (3.6 per cent) were published in 2001.

Table 1. Year-wise distribution of papers during 2001-2010

Year	Vol. No.	No. of issues	No. of papers
2001	21	5	10
2002	22	5	15
2003	23	6	19
2004	24	6	14
2005	25	5	13
2006	26	6	18
2007	27	6	35
2008	28	6	50
2009	29	6	50
2010	30	6	47
Total		57	271

6.2 Authorship Pattern

Table 2 shows the authorship pattern of the papers published in *DJLIT* during 2001-2010. Maximum numbers of papers (37.6 per cent) were from single author followed by two-authored papers (36.9 per cent). The Table also depicts year-wise authorship pattern. Papers by three or more authors comprised a mere 14.3 per cent and 9.2 per cent, respectively.

6.3 Study of References/Citations

Table 3 gives details of the number of references cited by the authors in their papers. Out of the 271 papers, 123 (45.38 per cent) have 1-10 references; followed by 85 papers (31.36 per cent) with 11-20 references; 29 papers (10.70 per cent) with 21-30 references; and 10 papers (3.69 per cent) with 31-40 references. Also, there were 19 papers (7 per cent) with

no reference and 5 papers with more than 40 references (one having as many as 119 references). Table also depicts the year-wise numbers of references.

6.4 Sources of References

Table 4 shows the various sources used by the authors for their research/study. Journals (40.31 per cent) comprised as the primary sources of reference for the studies undertaken by the authors. This was followed by books (20.68 per cent), Internet/Web (20.09 per cent), conference/symposia/proceedings (12.33 per cent), and reports (5.57 per cent). Theses, letters, and standards were though sourced by the authors but their number is negligible. The Table clearly brings out the fact that the information from Internet/Web is being increasingly cited by the authors in recent times in tune with the importance of e-resources being hosted under open access archives and institutional repositories.

6.5 Length of Papers

Table 5 shows the length of papers published during the period under study. Of the 271 papers, the largest number (167, 61.62 per cent) had 6-10 pages; 48 (17.71 per cent) had 11-15 pages; and 44 (16.23 per cent) 1-5 pages. Only one paper each (incidentally these are review papers) had a length of up to 25 and more than 30 pages, respectively. Table also shows the year-wise length of papers.

6.6 Special Issues

Table 6 shows the details of special/thematic issues of *DJLIT* brought out during 2001-2010 under the Guest Editorship of eminent LIS professionals both from

Table 2. Authorship pattern of papers published in DJLIT during 2001-2010

No. of authors	Year										Total
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	
One	6	4	8	3	5	3	18	29	17	14	107
Two	3	6	8	7	3	9	7	13	20	24	100
Three	1	2	3	2	2	2	7	4	10	6	39
≥ Four	-	3	-	2	3	4	3	4	3	3	25
Total	10	15	19	14	13	18	35	50	50	47	271

Table 3. References in papers published in DJLIT during 2001-2010

No. of references	Year										Total
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	
Nil	1	2	2	-	-	1	2	6	3	2	19
1-10	4	8	8	7	7	8	17	18	28	18	123
11-20	1	3	8	5	3	5	13	16	16	15	85
21-30	3	1	1	2	2	1	3	7	2	7	29
31-40	-	1	-	-	1	2	-	1	1	4	10
> 40	1	-	-	-	-	1	-	2*	-	1	5
Total	10	15	19	14	13	18	35	50	50	47	271

* One paper with 119 references

Table 4. Sources used by authors for their studies

Reference source	Year										Total
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	
Journals	57	62	63	58	71	123	154	253	260	281	1382
Books	43	49	50	47	19	51	97	142	74	137	709
Internet/Web	31	29	67	49	49	39	37	7	111	118	537
Conference/Seminar/ Symposia/Proceedings	15	6	9	7	28	50	49	122	40	97	423
Reports	4	7	4	5	9	26	29	33	20	54	191
Dissertations/Theses	1	-	3	1	3	2	1	7	1	3	22
Standards	-	1	-	1	1	-	-	4	-	3	10
Letters	1	-	-	-	-	-	-	1	-	-	2
Total	152	154	196	168	180	291	367	721	506	693	3428

Table 5. Length of papers published in *DJLIT* during 2001-2010

No. of pages	Year										Total
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	
1-5	1	1	3	3	1	2	2	10	14	7	44
6-10	3	7	11	9	10	10	25	33	32	27	167
11-15	4	6	5	2	2	4	6	6	3	10	48
16-20	1	-	-	-	-	2	2	1	1	3	10
21-25	1	-	-	-	-	-	-	-	-	-	1
> 30	-	1	-	-	-	-	-	-	-	-	1
Total	10	15	19	14	13	18	35	50	50	47	271

Table 6. Special issues of *DJLIT* brought out during 2001-2010

Year	Vol. & Iss. No.	Theme/Title	Guest Editor(s)
2002	Vol. 22 No. 3	Marketing of Information Products & Services	Dr O.N. Chaddha
2003	Vol. 23 No. 1	Future Publishing Technologies	Dr John R. Croft, Mr John P. Abbott and Dr Rao Aluri
2007	Vol. 27 No.1	Measurement of Indian S&T	Dr B.M. Gupta & Mr S.M. Dhawan
	Vol. 27 No. 2	LIS in India	Prof. C.R. Karisiddappa
	Vol. 27 No. 4	Intellectual Property Rights I	Dr A.L. Moorthy
2008	Vol. 27 No. 6	Intellectual Property Rights II	Dr A.L. Moorthy
	Vol. 28 No. 1	Open Access	Dr Usha Mujoo Munshi
	Vol. 28 No. 2	Information Literacy	Prof. C.R. Karisiddappa
	Vol. 28 No. 4	Online Exhibitions	Dr CK Ramaiah
2009	Vol. 28 No. 5	Knowledge Sharing	Dr M. Natarajan
	Vol. 29 No. 1	e-Learning	Prof. Pratibha Gokhale
	Vol. 29 No. 2	Social Science Gateways	Dr P.R. Goswami
2010	Vol. 29 No.5	Library Consortia	Dr A.L. Moorthy
	Vol. 30 No. 5	100 Years of LIS Education	Dr Jaideep Sharma

No special issues were brought out during 2001, and 2004-2006.

academia as well as research and development organisations/institutions. Out of 33 issues published during 2001-2006, only two (6.10 per cent) special issues were brought out in 2002 and 2003, respectively. There were no special issues during 2004-2006. But in the later part of decade, i.e., 2007 onwards, the journal

has published a number of thematic issues quite regularly; 12 (50 per cent) out of 24 issues.

6.7 Institution-wise Distribution of Papers

Table 7 shows institution-wise distribution of papers published in *DJLIT* during the period under study.

Table 7. Institution-wise distribution of papers

Institutions	Year										Total
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	
Universities/colleges	3	2	12	7	7	9	15	29	26	29	139
Govt research institutes	5	10	6	6	6	8	16	11	19	17	104
Pvt research institutions	-	1	1	1	-	1	2	7	4	1	18
LIS professionals	2	2	-	-	-	-	2	3	1	-	10
Total	10	15	19	14	13	18	35	50	50	47	271

Authors from government research institutions contributed 110 (40.6 per cent) papers followed closely by 105 papers (38.74 per cent) from universities. Authors from colleges and private research institutions comprised 11.07 per cent and 6.27 per cent, respectively.

6.8 Major Contributors

Analysis was also made about the frequently contributing authors to the journal in terms of number of articles (Table 8). One phenomenon was observed that in the case of a couple of institutions all the papers submitted have some common names, especially as the last author(s). There are instances from reputed institutions doing world-class R&D where the name of the Head of the institution is included as the last author. As a result, Heads of such institutions would have hundreds of papers to their credit. As such 'orders' come from the top, all have to follow. As per the ethics of publishing, it is

Table 8. Major contributors to *DJLIT*

Name of the major contributors	No. of contributions	Rank
B.M. Gupta	20	1
S.M. Dhawan	11	2
Sumit Goswami	8	3
Ashok Kumar	7	4
Vinod Kumari Sharma	6	5
Alka Bansal	6	5
M. Natarajan	6	5

not proper to include the names of those who help in gathering data, providing facilities or helping in typing. Their help has to be acknowledged at the end of the paper. In view of this, the names of the first three authors were taken into consideration for the most contributing authors for this study. Accordingly, Dr B.M. Gupta (20) is the top contributing author for the *Journal* during the period covered by the study.

7. CONCLUSION

The *Journal* has completed 30 years of its publication. During these years it has kept pace with the improvement in its content coverage or adoption of latest

publishing technology, or the fast emerging Web publishing scenario. The *Journal* has a remarkable change after 2006. The number of papers published increased substantially. The average length of papers was 6-10 pages, which is an ideal length for research articles. Papers from single authors formed the major chunk of total papers published. Out of 3428 references sourced by the authors, 1382 were quoted from the journals. Fifty-seven issues brought out during the period included 14 special issues from eminent LIS professionals; the *Journal* has published thematic issues at an average of 3 every year since 2007. Authors from government research institutes (104), and universities (139) were the main contributors.

Thirty years is a long time to sustain a publication. Subscription of *DJLIT* is continuously increasing, despite its availability as an open access journal on the Web. It has been successful in its primary objective of information dissemination in the field of LIS. *DJLIT* has emerged as a core journal of LIS and a platform for knowledge sharing, especially among the students of LIS.

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Call for Papers

DESIDOC Journal of Library and Information Technology (DJLIT) in its endeavour to keep its readers up-to-date about the current happenings in the field of library and information science is planning to bring out Special Issues on the following subjects. The articles published in the *Journal* are peer-reviewed, and indexed in *Library and Information Science Abstracts (LISA)*; *Library, Information Science and Technology Abstracts (LISTA)*; *Indian Citation Index (ICI)*; and *Indian Science Abstracts*. Original ideas, theoretical and application-oriented papers and case studies in the context of the themes in the digital form (MS Word) may be sent to the Editor, *DJLIT*. The paper(s) will be published only after peer-evaluation by the respective Guest Editors.

Topics of the Special Issues

- ✂ Methodological Issues and Problems in LIS Research
- ✂ Health Information Systems and Services
- ✂ Virtual Reference Service
- ✂ E-Books

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